

FLIGHT

The
**AIRCRAFT
ENGINEER
&
AIRSHIPS**

First Aero Weekly in the World.

Founder and Editor: **STANLEY SPOONER**

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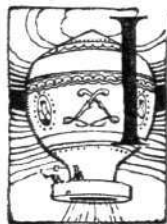
DIARY OF FORTHCOMING EVENTS

Club Secretaries and others desirous of announcing the dates of important fixtures are invited to send particulars for inclusion in the following list:—

1924

- Jan. 9 "Water-Cooled Aero Engines," by A. J. Rowledge, before Inst. of Automobile Engineers.
- Jan. 10 "Materials from the Aeronautical Point of View," by Dr. Aitchison and Mr. North, before R.Ae.S.
- Jan. 24 "Fabric and Dopes," by Dr. Ramsbottom, before R.Ae.S.
- Feb. 7 "Airmanship at Sea," by Sqd.-Ldr. Maycock, O.B.E., R.A.F., before R.Ae.S.
- Feb. 21 "Aerial Photography and Survey," by Mr. H. Hamshaw Thomas, before R.Ae.S.
- Mar. 1 French Aero Engine Competition.
- Mar. 6 "Sound Detection," by Major Tucker, before R.Ae.S.
- Mar. 20 "The Report of the Aeronautical Research Committee's Panel on Scale Effect," by Capt. W. S. Farren.
- April 3 "The British Aviation Mission to the Imperial Japanese Navy," by Colonel the Master of Sempill, before R.Ae.S.

EDITORIAL COMMENT.



Aviation circles the most important event of the week has been the publication of the text of the agreement between the President of the Air Council on the one hand and the British, Foreign and Colonial Corporation on the other concerning the formation of the new Imperial Air Transport Company, or "Million Pound Monopoly Company" as it was dubbed while its foundation was being discussed. Elsewhere in this issue of FLIGHT will be found a fairly full summary of the text of the agreement, from which it should be possible for our readers to form a very good idea of the most important points involved.

The formation of the new company is, of course, the direct outcome of the recommendations made by the Hambling Committee, which was called to consider the best ways and means of encouraging commercial aviation by a system of subsidies. It will still be recollected that the main result of the deliberations of the Hambling Committee was the recommendation that one single powerful company be formed to take the place of the four existing air transport concerns, and that subsidies be granted to such company over a period of 10 years, the main difficulty with the previous subsidy arrangements being that the firms concerned were not given sufficient security of tenure. (A summary of the findings of the Hambling Committee was published in FLIGHT of March 1, 1923.)

Personally we are strongly against anything in the nature of a monopoly, and the proposed company is very much of a monopolistic character. It must be admitted, however, after perusing the text of the agreement, that if a monopoly company is unavoidable—and after the evidence called by the Hambling Committee, it appears certain that it is unavoidable if commercial aviation is to be given a fair chance to develop along the right lines and on a sufficiently large scale—the agreement indicates that every possible care has been taken to eliminate, or, at any rate, reduce to a minimum, all foreseeable pitfalls and evils attending any institution immune from competition.

When the Hambling report was first published, and on several occasions subsequently, we called attention to some of the more dangerous possibilities, such as that the new company might decide to construct its own machines, or acquire control of an existing aircraft construction firm, or standardise with a view to economy in first cost and maintenance a type of machine suitable for one particular route, but not necessarily for all those contemplated, or that seaplanes might be left out of consideration altogether. All these possibilities would have meant a hampering of progress, and would have resulted in the country not getting full value for the money expended on subsidies. We are glad to note from the text of the agreement that these dangerous possibilities have not been overlooked, and that as a matter of fact provision has been made for preventing any such retrograde steps being taken.

The new company will combine the four existing companies, who will be represented on the board of directors, and the existing lines will be continued and extended if, in the opinion of the directors, such extensions are practicable and advisable. Two directors will be appointed by the President of the Air Council to represent the Government, and officers of the Air Ministry are to have full access to all technical and operational information collected by the company. Thus a balance should be struck between the various interests: the operating company, the four existing companies, the Treasury and the Air Ministry.

It is specifically stated that the company shall not, except with the consent of the President of the Air Council, undertake the manufacture of aircraft or engines, and shall not hold shares in any aircraft or aero-engine construction firm, and that all such construction and repairs shall be carried out by British firms, the machines used to be of British design and manufacture. A further important clause in the agreement states that the company shall, when required by the President of the Air Council, try out under conditions as near as may be to the ordinary conditions of business experimental types of aircraft constructed for the President, provided such aircraft have passed their tests at Government establishments. Thus development should not be hampered by too early standardisation.

Concerning the financial side of the question there seems to be little need of comment. The sliding scale upon which the amounts payable each year

are arranged seems sound, giving the greatest amount of support during the first years, when presumably it will be most required, and proportionately less as the end of the ten years' period is approached. The amount involved, one million sterling, is by no means excessive, the average being, in fact, proportionately less than that now being paid to the separate companies.

“Dixmude” The terrible calamity which has overtaken the French airship “Dixmude” will awaken the most sincere sympathy all over the world. We in this country can the more readily appreciate the great loss as we have suffered a very similar bereavement in the fatal accident to the “R.38” over the Humber. There is, in fact, considerable similarity between the two catastrophes. Both airships carried more than their normal crew. Both carried a number of highly-placed officials, and both involved the loss of some of the greatest airship experts of each country. To the many messages of sympathy sent to France from this country, beginning with one from the King, we would add one on behalf of all readers of FLIGHT, who feel very keenly the loss sustained, not only by France but by the aviation communities of the entire world.

As to the causes of the accident, no definite information has yet come to hand. It appears probable, however, that the ill-fated airship caught fire, either through breaking up as did the “R.38,” or through being struck by lightning. It also seems that the staff work was not all that it might have been, and an inquiry is being held into the conditions under which the cruise was undertaken.

Briefly the lesson to be learned seems to be that it is unwise to send out any airship unless suitable bases are provided at points always within reach from the route followed, and that a lightly-built airship like the “Dixmude” is not suitable for prolonged journeys far from a base. The calamity cannot fail to have its effect on the proposed Burney airship scheme, and rather seems to lend strength to the plea repeatedly made in these columns for extensive research into airship problems before the construction of five-million cubic feet ships is undertaken. It seems probable that a few thousands wisely spent on research may be the means of saving millions later, to put the matter on no higher level than that, and leaving out the consideration of possible loss of valuable, nay, irreplaceable, lives.

Air Vice-Marshal Higgins taking Charge in Iraq

It is announced that Air Vice-Marshal J. F. A. Higgins, C.B., D.S.O., A.F.C., Air Officer Commanding Inland Area, Royal Air Force, will succeed Air Marshal Sir John M. Salmond, K.C.B., C.M.G., C.V.O., D.S.O., as Air Officer Commanding H.M. Forces in Iraq, from April next. Air Vice-Marshal Higgins will leave this country for Iraq in February.

An announcement will be issued later of other appointments to the higher commands of the Royal Air Force consequent upon the present intimation.

Melbourne to Sydney in a Fairey

News has just come to hand of the first official seaplane flight from Melbourne to Sydney, made on November 15, 1923, by one of the Australian Naval Air Service Fairey III.D seaplanes, fitted with Rolls-Royce “Eagle VIII” engine.

Leaving Point Cook at 5 a.m. and proceeding along the coast, via Port Albert, Paynesville, Marlo, Gabo, and Twofold Bay, the seaplane landed at Eden at 9 a.m., having covered a distance of roughly 500 miles. Some delay was experienced owing to the petrol refill not being available on time. How-

ever, the journey was resumed at noon, and Sydney was reached at 3.9 p.m., giving a total of about 7 hours' travelling time, this latter stage being from 250 to 300 miles.

The seaplane was in charge of Flying Officer I. E. McIntyre, Wing Commander Goble acted as navigating officer, and a mechanic was included in the personnel.

This flight is remarkable in that it is the first occasion on which a flight of this extensive nature has been made in Australia, and it is, of course, the first time that a seaplane has completed the journey along the coast from Melbourne to Sydney.

The machine used is one of a batch of Fairey III.D seaplanes supplied to the Australian Naval Air Service. It is identical with those used by the British Air Service in the recent operations in Chanak, Turkey, and other places, the Australian Government having adopted the policy of using the same machines as the British Government for similar purposes.

It has been pointed out by Australian Air Force officials that the New South Wales coast is considered particularly suitable for seaplane flights, owing to the numerous inlets and protected waters.

A ROUMANIAN AEROPLANE

The Sesefsky Biplane

HITHERTO most of the "smaller" European countries have been relying mainly on Great Britain or France for their supply of aircraft, and "home-made" machines are exceptional. Of late, however, such countries as Lithuania and Roumania—to say nothing of Czecho-Slovakia—have produced successful home-designed and -built machines. One of these, hailing from Roumania, we illustrate herewith and supplement with a few brief particulars. The Sesefsky

so mounted as to be adjusted in its incidence. The elevators are of the divided type.

The pilot's cockpit is situated just behind the trailing edge of the main planes, from which position a very good range of vision is obtained. Immediately behind the pilot's cockpit in the middle of the fuselage is that of the observer, who also has an excellent view. The engine unit is mounted in the nose of the fuselage, and is totally enclosed by a deep

The Sesefsky biplane: A reconnaissance machine, designed by Eng. S. Sesefsky, Director of Civil Aviation in Roumania.



biplane, as it is called, was designed by Engineer S. Sesefsky, Director of Civil Aviation in Roumania, and was constructed by the Société Astra of Arad. It is a military machine, intended for reconnaissance work, and is a tractor biplane more or less on conventional lines. As timber is one of the principal products of Roumania, this material is largely used in the construction of this machine.

The fuselage is of fair streamline form, comparatively deep in front in order to accommodate the engine, and tapering aft of the observer's cockpit to a vertical knife-edge at the rear. It is of rectangular cross-section, and the lower longerons are doubled from the observer's cockpit forward.

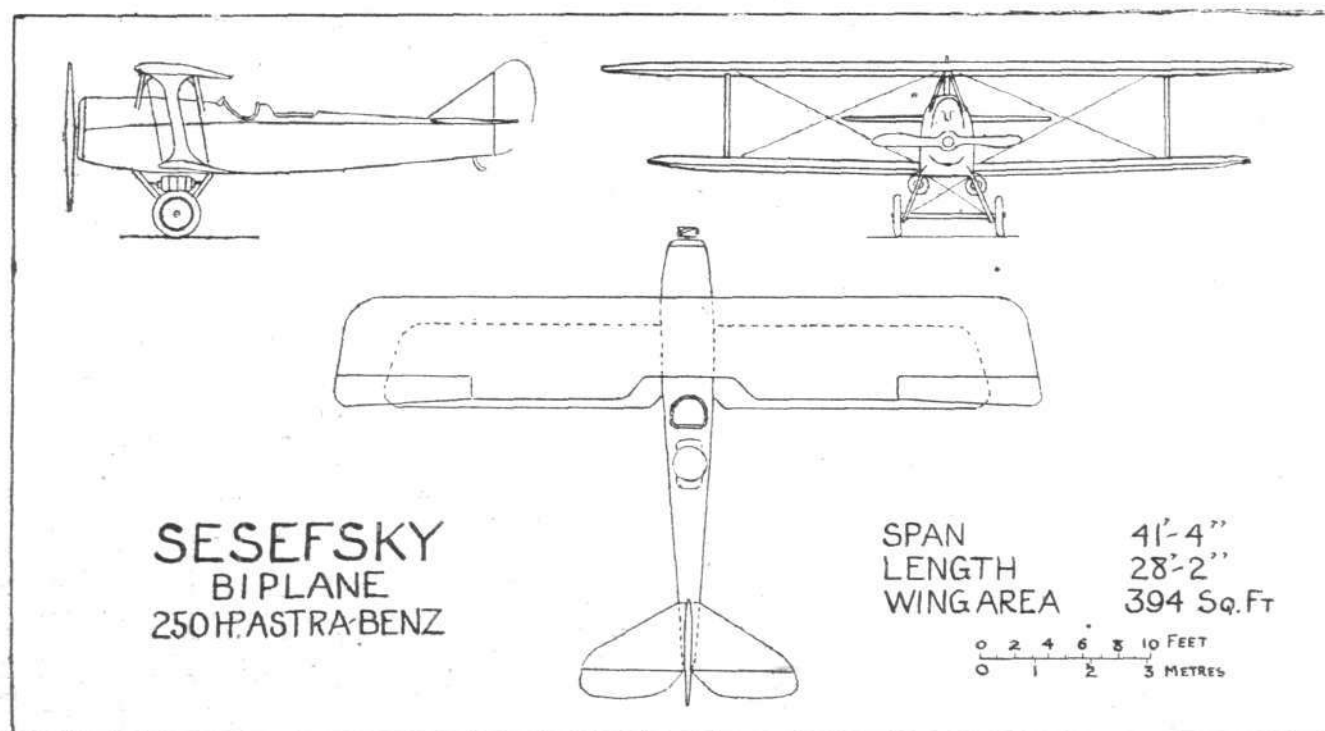
One of the principal features of the Sesefsky biplane is to be found in the tail surfaces. The vertical triangular fin is built up of multi-ply wood integral with the fuselage. The horizontal tail surface is comparatively large, and is

duralumin cowlings. In the model illustrated, a 250 h.p. Astra-Benz engine is fitted, but it is possible to fit a 400 h.p. engine if desired, in which case the speed of the machine would be increased from 115 m.p.h. to 143 m.p.h.; the ceiling, also, would be increased from 17,060 ft. to 23,600 ft.

Two Lamblin radiators are employed for the cooling, these being mounted between the V struts of the undercarriage. The petrol tank is installed behind the engine, within the fuselage in front of the pilot's cockpit.

The undercarriage is of the conventional V type with a pair of wheels mounted on an elastic sprung axle. The tail skid is hinged to the bottom longerons and connected by shock absorbers to the top longerons.

The wings are of the single bay type, with a single interplane strut on either side of the fuselage. The top plane, which is of larger span and chord than the lower one, has a



THE SESEFSKY BIPLANE: General arrangement drawings, to scale.

pronounced forward stagger, whilst the lower plane is given a slight dihedral angle. Ailerons are fitted to the top plane only. The whole wing unit is braced with steel cable. A comparatively thick wing section, of the bi-convex type, is employed.

This machine is equipped with a camera, wireless, and two parachutes, in addition to the usual instruments. The armament consists of two machine guns mounted on revolving mounts operated by the observer, and a fixed machine gun, firing through the air-screw, operated by the pilot.

The principal characteristics of the Sesevsky biplane are :—

Span	41 ft. 4 ins.
O.A. length	28 ft. 2 ins.
Height	10 ft. 2 ins.

Wing area	394 sq. ft.
Weight, empty	2,469 lbs.
Weight, laden	3,571 lbs.
Useful load	661 lbs.
Weight per sq. ft.	9 lbs.
Weight per h.p.	14 lbs.
Speed at ground level	115 m.p.h.
.. 3,280 ft.	113 m.p.h.
.. 6,562 ft.	110 m.p.h.
.. 9,843 ft.	106 m.p.h.
Landing speed	56 m.p.h.
Climb to 3,280 ft.	5 mins. 56 secs.
.. 6,562 ft.	13 mins. 52 secs.
.. 9,843 ft.	23 mins. 57 secs.
Ceiling	17,060 ft.

THE DEATH OF A GREAT PIONEER

Gustave Eiffel Passes Away

It is with very great regret that we have to announce this week the death of M. Alexandre Gustave Eiffel in Paris on December 27, at the age of 91. The work of Gustave Eiffel has been of incalculable value to the development and progress of aviation, and forms a monument greater and far more lasting than that which the general public will mainly associate with the name of the dead engineer—i.e., the Eiffel Tower in Paris. The famous tower must, sooner or later, be dismantled or entirely rebuilt and renewed until no part of the original structure remains, but the published works of Eiffel, not to mention the knowledge and experience which these works have diffused into aeronautical circles throughout the civilised world, will endure for ever.

Alexandre Gustave Eiffel was born in Dijon in 1832, and was educated as an engineer. He early turned to structural engineering as his *specialité*, and in 1858 he completed his first important work, the railway bridge across the Garonne at Bordeaux, whose swift-flowing stream and periodic floods (who has not read Zola's wonderful *l'Inondation*?) were a serious obstacle to bridge building. Eiffel succeeded, by means of compressed air, in sinking the piers to a depth of 80 ft. below the surface of the river. In 1886 Eiffel offered to build the tower which was later to carry his fame to the four corners of the world, and in 1889 the tower was finished in readiness for the Paris Exhibition of that year. The tower was not built without opposition, both on technical and æsthetic grounds, but it was finished, and proved Eiffel's theories correct. Regarded by many as an eyesore, the Eiffel Tower has outlived that opinion long ago, and Paris would not be Paris without the famous tower, which can be seen from almost anywhere in the French capital. From a practical point of view the Eiffel Tower has proved of the greatest utility as a wireless station; its 1,000 ft. height making it admirably suitable for this purpose.

With the rest of Eiffel's structural engineering work we are not so much concerned here. What is of surpassing interest is his work in aerodynamics, and although this work is, or should be, well known to many of our readers, it may not be amiss if we make a brief reference to the main milestones in Eiffel's aeronautical career. Having been for a number of years interested in meteorological subjects, and as the author of many important works on meteorology, Eiffel began to turn his attention to aerodynamic problems, and in 1907 he published his first work on this subject, entitled "*Recherches Experimentales sur la Resistance de l'Air exécutées à la Tour Eiffel*." In 1910 came "*La Resistance de l'Air. Examen des formules et des Experi-*

ences," and in 1911 the famous "*La Resistance de l'Air et l'Aviation*," giving the results of experiments carried out at the Champ-de-Mars laboratory. This was, perhaps, the volume which more than any other made Eiffel known throughout the world, and its popularity in English-speaking countries was in no small measure due to the excellent translation by Jerome C. Hunsaker (now Assistant Naval Attaché at the American Embassy in London) published in 1913.

In 1914, just before the outbreak of war, was published the volume entitled "*Nouvelles Recherches sur la Résistance de l'Air et l'Aviation*." This work gave particulars of the work carried out at the laboratory at Auteuil, whence Eiffel had in the meantime transferred from the Champ-de-Mars laboratory. Incidentally it is of interest to note that the earlier experiments made by Eiffel were made by dropping various surfaces from the Eiffel Tower, and by timing their fall through a given distance the forces on them were deduced from consideration of the weight of the surfaces.

Perhaps the last great work of Eiffel's to become known in wide circles was his "*Résumé des principaux travaux exécutés pendant la guerre au Laboratoire Aérodynamique Eiffel, 1915-18*," which was published in 1919. As the title indicates, this work contained a résumé of the very valuable experiments made during the war, and needless to say proved of surpassing interest in view of the scarcity of published data during the four years of war. Incidentally it may be of interest to mention that whenever he had published a new volume Eiffel never failed to send *FLIGHT* a copy, and one of the most cherished books in our possession is the above volume, inscribed in Eiffel's own peculiar handwriting, "*Au FLIGHT, hommage de G. Eiffel*." This was four years ago, when Eiffel was 87, and we prize it particularly because, although by then Eiffel had relinquished the reins at Auteuil and turned the laboratory over to the authorities, it showed that he had not lost interest in his favourite subject, nor had he forgotten old friends who were among the first to study his early works on aerodynamics.

What makes Eiffel's life and work all the more valuable is that his aerodynamic researches were not carried out with the object of making financial gains. In fact, within the time at his disposal Eiffel was always willing to test models of new designs, be they wing sections, fuselages or complete machines, free of cost, the only stipulation made being that the results of the tests should be published in his works so that the knowledge gained might be available to all. The loss of Gustave Eiffel is a serious one, but his memory will live for ever.

THE HEART OF AN AEROPLANE OR "THE 'LION' OF THE MOVIES"

At the invitation of Messrs. D. Napier and Son, Ltd., we were given the opportunity of witnessing, on Monday afternoon, the 31st ult., the private view of an extremely interesting and instructive film. This film was entitled "*The Heart of an Aeroplane*," and the principal part was played by the famous Napier "*Lion*." The subject for the "*story*" was a somewhat ambitious one, viz.: the construction, etc., of the Napier "*Lion*," and the producers (The Gaumont Company, Ltd.) were wise in not attempting to make this film a complete story, from start to finish, of an aero engine. Those of our readers who have at some time or other made a tour of inspection of the Napier—or any other—aero engine works, and have attempted to follow up the progress of an engine during the various stages of its construction, need not be told that this is a very prodigious, not to say, tedious task. To attempt to

achieve this same object on the film would require even greater time and patience, both on the part of the producers and the "*lookers-in*."

Each part—and there are a great many—used in the construction of the "*Lion*" has to undergo a large number of operations before it is satisfactory for inclusion in the complete engine. A selection of these operations have been filmed, with the result that a very good idea is obtained not only of the construction of the Napier "*Lion*," but of the care and the enormous amount of work involved during the construction.

"*The 'Lion' of the Movies*" finishes up with a few incidents and "*close-ups*" of some of the Napier "*Lion*" aviation achievements, such as the Aerial Derby winners, Supermarine Schneider Cup winner, commercial activities, etc.

THE IMPERIAL AIR TRANSPORT COMPANY

Terms of Agreement Published

THE terms of agreement between the President of the Air Council on the one hand and the British, Foreign and Colonial Corporation, Ltd., on the other, were published on December 28. Copies of the text of the agreement can be obtained from H.M. Stationery Office, Imperial House, Kingsway, W.C. 2. The very cumbersome title is "Air Ministry Agreement made with the British, Foreign and Colonial Corporation, Ltd., providing for the formation of a Heavier-than-Air Air Transport Company to be called the Imperial Air Transport, Company Ltd." (price 6d. net).

In a brief preface Sir Samuel Hoare, Secretary of State for Air and President of the Air Council, states that the agreement is to operate a heavier-than-air transport service in Europe, and that the agreement carries out the recommendations of the C.A.T. Subsidies Committee (better known as the Hambling Committee).

There are two agreements; the first is made with the issuing house (The British, Foreign and Colonial Corporation, Ltd.), and the second, to be signed by the Imperial Air Transport Company, Ltd., when formed.

The first agreement, with the British, Foreign and Colonial Corporation, Ltd., of Gresham Street, London, dated December 3, 1923, provides that the corporation will, with the least possible delay, form and register under the Companies Act a company limited by shares, with an initial share capital of not less than £1,000,000, divided into 1,000,000 shares of £1 each, and will guarantee the subscription of 500,000 of the said shares.

The memorandum and articles of the operating company are to be in such form as shall be approved by the President, and in particular shall provide:—

(a) That the objects for which the operating company is formed are, amongst other things, (1) to acquire on such terms as the President shall in writing reasonably approve, the businesses at present carried on by Handley Page Transport Ltd., Instone Air Line, Ltd., Daimler Hire, Ltd., and British Marine Air Navigation Company, Ltd., as aerial transport companies, or, in default of such acquisition, to establish an air transport service to operate equivalent services; and (2) to enter into an agreement with the President in the form of the draft agreement set out in the schedule hereto (which agreement is hereinafter referred to as the scheduled agreement).

(b) That the consideration in cash for the purchase referred to in paragraph (1) of sub-clause (a) of this clause (which shall not exceed one-third part of the whole consideration) shall be provided, together with the initial working capital of the operating company, by means of 10s. per share, payable on application and allotment, of the first 500,000 shares issued by the operating company, and that the remaining two-third parts of such consideration shall be satisfied by the allotment to the issuing house or its nominees of fully paid-up shares of the capital of the operating company.

(c) That all the directors and shareholders of the operating company shall at all times be British subjects.

(d) That during such period as the scheduled agreement shall remain in force the President shall be entitled to nominate on behalf of His Majesty's Government two of the directors of the operating company, who shall join the board thereof after allotment, and shall not be required to hold any qualification shares.

THE IMPERIAL AIR TRANSPORT COMPANY, LTD.

Then follows the schedule referred to above, which takes the form of an agreement to be signed between the President of the Air Council and the Imperial Air Transport Company, Ltd., and requires, among other things:—

1. On or before April 1, 1924, the company shall establish, and from the said April 1, 1924, until such time as the subsidy to be paid to the company under Clause (4) hereof shall have been completely repaid to the President in accordance with either Clause 6 (1) or Clause 17 (d) hereof, shall continue to operate under the terms of this agreement so far as applicable an efficient air service for the transport of passengers, mails, and freight between the following places, that is to say: London and Paris, London and Brussels, London and Amsterdam, and Southampton and the Channel Isles, or such other places approved by the President as, in the opinion of the company, may be commercially desirable, provided always that the air service to be operated by the company under the provisions of this clause between Southampton and the Channel Isles, or alternative places respectively, shall be operated by seagoing marine aircraft.

Extension of Services

2. In addition to the air service specified in Clause 1 hereof (which together with the additional air service specified in this clause are hereinafter referred to as the said air service) the company shall during the period aforesaid operate such further services as in the opinion of the directors of the company for the time being may be practicable and advisable both in extension of the routes specified in Clause 1 hereof and in addition thereto (whether an air service on such additional routes may have been already operated or not), and in particular the company shall use its best endeavours to secure for transport by the said air service passengers, mails, freight on routes hitherto operated by Continental air lines, and nothing herein contained shall prevent the company from entering into such agreements with foreign companies as in the opinion of the directors of the company for the time being may be necessary for the furtherance of the objects of this agreement or in the interests of the company generally.

Minimum Mileage

3. During the first four years of the period aforesaid the company shall complete in each year a minimum mileage of 800,000 miles in the operation of the said air service, and for the said period of four years an average minimum yearly mileage of 1,000,000, and during the remainder of the said period the minimum yearly mileage of 1,000,000.

Details are given as to the calculation of the mileage according to the charted routes, and it is stipulated that for the purposes of the above clauses the mileage must be accomplished by British-built and British-registered heavier-than-air aircraft carrying, or available for carrying, passengers, mails, and freight for which ordinary commercial rates available for the public are charged.

The Subsidies

The next clause provides for the yearly payments of subsidy, subject to certain conditions. The total amount in ten years reaches £1,000,000, and the payments are to be made in diminishing instalments as follows:—

	Per annum
First four years	£ 137,000
Fifth year	112,000
Sixth year	100,000
Seventh year	86,000
Eighth year	70,000
Ninth year	52,000
Tenth year	32,000

There are six further sub-sections to this clause, laying down the conditions under which the yearly sums shall be paid and the penalties to be imposed if the company fail to fly the minimum mileage. For each of the ten years the President shall pay to the company a sum equal to 96 per cent. of the subsidy payable in the particular year by 12 monthly instalments, and the remaining 4 per cent. will be retained and paid under conditions mentioned below. The payments will be made monthly in arrear and the company will render a return monthly of the mileage flown in the preceding month, the year commencing in each case on April 1. If in any year it shall appear to the President unlikely that during such year the company will complete the minimum mileage of 1,000,000, the President may withhold the monthly instalments payable in respect of the last two months of such year. The decision of the President on the amount of mileage flown in each month for subsidy purposes shall be accepted by the company as correct.

When the mileage flown in any year so notified monthly and certified as correct shall amount to 1,000,000 or more, the President shall, in respect of such year, forthwith make payment of the 4 per cent. of the maximum yearly amount retained by him, together with the amounts, if any, already withheld under the conditions referred to above. On the other hand, if the mileage in any year shall amount to less than 1,000,000 "the yearly amount payable by the President for the said yearly subsidy in respect of such year shall be reduced by a sum bearing the same proportion to the maximum yearly amount of the yearly subsidy for such year as the difference between the yearly mileage so notified and 1,000,000 miles bears to 1,000,000 miles, and the company shall pay to the President as liquidated damages in respect of such year a sum equal to one-half of the amount by which the said yearly subsidy shall be reduced as aforesaid." Provision is made for adjusting any sum due as above against any amounts the

President has already withheld, and the President may, if necessary, from time to time deduct any deficit owing by the company from any further instalments of the subsidy until the whole deficit has been paid. These clauses are, however, modified somewhat for the first four years of the company's operations to cover the average mileage of the four years.

Testing New Types

Another clause provides that the company shall "try out under conditions as near as may be to the ordinary conditions of the business experimental types of heavier-than-air civil aircraft or commercial aeroplanes constructed for the President which have successfully passed their tests at Government establishments, and shall also carry out such experimental work as the President may require; and the President shall repay to the company the net cost price to the company of any work done by the company for the President under this clause, and in ascertaining such net cost no account shall be taken of any establishment or overhead charges or interest on capital outlay."

The company shall keep proper records of all flights, both service and experimental, and shall furnish to the President returns embodying such information, as well as allowing an officer of the Air Ministry to inspect any further technical information compiled by the company.

Not to Manufacture

A further clause debar the company, except with the consent of the President in writing, from manufacturing aircraft or aero engines or holding shares in companies engaged in such work. All construction and important repairs (except in emergency in foreign territory) shall be carried out on British territory, and all aircraft, engines, and accessories shall be of British design and manufacture, subject to the President being satisfied that the costs and profits of the firms supplying the material are reasonable.

No pilot is to be employed regularly on the air service without passing a finishing course of instruction in the types of commercial aeroplane he is to pilot; and all the pilots shall be such persons as shall be enrolled in the Air Force Reserve or the Auxiliary Air Force. The members of the technical and administrative ground personnel shall be British subjects or subjects of the Dominions, Colonies, British Protectorates, or British mandated territories in which they are employed; and 75 per cent. of such persons shall be enrolled, except when the President otherwise agrees, in the Air Force Reserve or the Auxiliary Air Force Reserve or in a Dominion or British Colonial Reserve or Auxiliary Force. Other clauses provide for the proper equipment of the commercial aircraft operated by the company, for the transmission of meteorological information by wireless, and the continuance of the aerodrome facilities already provided by the Government to the existing companies.

Until after March 31, 1934, or the sooner determination of the agreement, the President will not grant subsidies to any other commercial air transport company in respect of a heavier-than-air transport service operating in Great Britain and Europe (Europe for the purpose of this sub-clause shall

be considered as including the Mediterranean Sea and the Black Sea and to be bounded on the east by the Ural Mountains, the Caspian Sea, and the Caucasus Mountains), but nothing shall prevent the President granting subsidies to any company or individual in respect of airship or lighter-than-air air transport services whether operating in Great Britain, Europe, or elsewhere.

A variation has been made in the allocation of profits from that originally suggested under the Hambling scheme. Ten per cent. on the paid-up capital of the company shall first be available for distribution among the shareholders, and the balance (if any) shall be applied as to one-third to repayment of the yearly subsidies, as to one other third to the development and improvement of the air service provided by the company and the development of British civil air transport or either of them, in such proportions as the directors think fit; and the remaining third shall be available for distribution among the shareholders. Provision is made that if and so long as the total amount for the time being repaid to the President out of the third of the profits above 10 per cent. is equal to the total amount of the yearly subsidies which have been paid, no further payment out of profits shall be made to the President, and any balance can be applied as the directors think fit.

The company has the right to tender for air services outside the area mentioned above, in respect of which the President may offer any subsidy; and the operating company can apply to any British, Dominion, Colonial or foreign Government or companies for assistance in the establishment of air services within the British Empire or elsewhere, and receive subsidies in respect of the same.

National Emergency

The whole of the company's equipment can be taken over by the State in a national emergency, subject to reasonable compensation. The workpeople employed by the company in the United Kingdom, or ordinarily resident there, are to be paid not less than the rates of wages recognised by employers and trade societies in the various districts; and those of foreign nationality neither more nor less than the standard rate of wages in their several districts.

In pursuance of the House of Commons (Disqualification) Acts no member of the House of Commons shall be admitted to any part or share, or to any benefit to arise therefrom.

The President may determine the agreement in the event of the company failing to carry out its provisions, or if a winding-up order be made against the company, or if a receiver be appointed, while the company may take similar action by giving the President six months' notice in writing and releasing the President from all claims and liabilities in respect thereof, and paying the President all sums due to the President under the agreement, including any balance of subsidies not then repaid.

The final clause provides for the reference of all disputes to a single arbitrator agreed upon by the President and the company, in default of such agreement the appointment to be made by the Lord Chief Justice.

Water-cooled Aero Engines

THE next London General Meeting of the Institution of Automobile Engineers will be held on Wednesday, January 9, 1924, at The Institution of Mechanical Engineers, Storey's Gate, St. James's Park, London, S.W. 1, at 6.30 p.m., when Mr. A. J. Rowledge will read a paper entitled "Water-Cooled Aero Engines." Members of the Institution of Aeronautical Engineers have been specially invited to attend this meeting and take part in the discussion.

The paper points out that co-operation between the aeroplane and the aeroplane engine designer is very necessary. The water-cooled system has many advantages, and will probably continue to be used for aero engines, despite the great advance made in air-cooling, the former being capable of further development. The main criterion for an aero engine is total weight of power plant against the thrust horsepower developed. Other requirements are reliability, small head resistance, and cheapness. The successful design of a variable-pitch airscrew or two-speed gear is much overdue, and is now an urgent requirement. The development of the metal airscrew is making satisfactory progress. It appears to be necessary to use gearing between the airscrew and the engine, if each is to be allowed to run at its most efficient speed, for all but very fast machines. When gearing is adopted it is necessary to have at least twelve cylinders to get uniform torque. The 12-cylinder V-engine is a very suitable form to adopt.

This paper will also be read before the Coventry members of the Institution at the Railway Hotel, Coventry, on Tuesday, January 22, at 7 p.m.

Visitors are invited to either of the above meetings, and those who desire to take part in the discussion may obtain an advance proof of the paper on application to the Secretary, The Institution of Automobile Engineers, Watgate House, York Buildings, Adelphi, London, W.C. 2.

Metal Construction in Denmark

THE Rohrbach Metal Aeroplan A/S of Copenhagen have just completed the construction of a twin-engined all-metal flying boat fitted with two Rolls-Royce "Eagle IX" engines mounted above, and slightly ahead of, the leading edge of the wing. The machine was designed by Herr Rohrbach, who was formerly chief designer to the Zeppelin-Staaken works in Germany, and is built of Duralumin throughout. The preliminary flying tests are said to have been quite successful, although certain minor modifications are still necessary. The petrol tanks are carried underneath the wing, one on each side, somewhat after the fashion introduced by the Westland biplane in the Martlesham trials, and the fuel is pumped from the main tanks into a gravity tank carried above the engines. The boat is of the relatively narrow-beam type, and lateral stability on the water is ensured by two wing floats placed some distance out.

A Desert Air Mail "Record"

ACCORDING to *The Times* Beirut correspondent, the desert air mail service broke all records on December 27 and 28. Leaving Baghdad at 2 p.m. on Thursday, December 27, the mail convoy arrived at Beirut 24 hours later. The actual flying time for the 600 miles of desert is stated to have been 16 hours.

LIGHT 'PLANE AND GLIDER NOTES

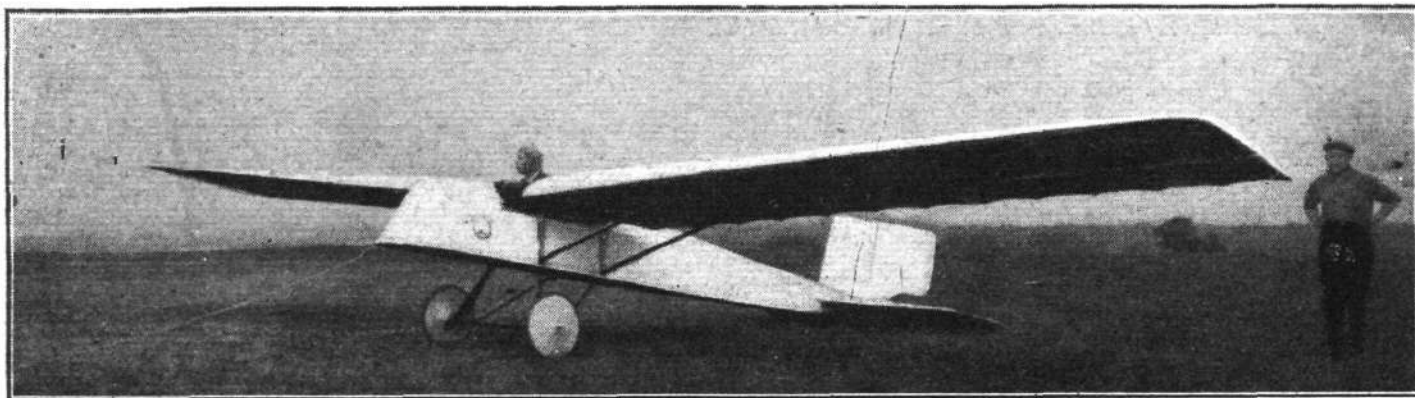
Those wishing to get in touch with others interested in matters relating to gliding and the construction of gliders are invited to write to the Editor of FLIGHT, who will be pleased to publish such communications on this page, in order to bring together those who would like to co-operate, either in forming gliding clubs or in private collaboration.

WE are pleased to note the formation of a new club, the Lancashire Aero Club, which will have its headquarters in Manchester, and will, it is hoped, eventually become affiliated with the Royal Aero Club. Some of the members of the club have built a glider, and the construction of a light aeroplane is, we understand, to be commenced shortly. While the chief object of the Lancashire Aero Club is the building and flying of light aeroplanes and gliders, it is hoped to attract members interested in all branches of aviation. Will FLIGHT readers

when he wanted to make the return journey a blinding snow-storm made flying quite impossible, and consequently the machine was shipped back. At any other time of the year there is no doubt the splendid little machine would have returned under her own power; nor is it any shame for the "plucky little ship" to have been baulked by weather which kept machines with twenty times the power in their sheds. Next spring and summer we hope to have many more noteworthy flights of this nature to record.

* * *

SOME weeks ago we briefly recorded in these columns the preliminary flights of a monoplane glider, designed and built by Mr. H. J. Nordman of Flushing, Long Island, U.S.A. Mr. Nordman has now very kindly sent us some photographs of his machine, some of which are reproduced herewith. The



THE NORDMAN MONOPLANE GLIDER: This view shows the machine just before making a flight at the Belleclaire County Club at Bayside, L.I. The pilot is Mr. Arthur Heinrich.

in Manchester and district who are interested communicate with the Secretary, Mr. C. J. Wood, c/o Messrs. A. V. Roe and Co., Ltd., Newton Heath, Manchester?

* * *

WITH reference to the Selfridge Prize of £1,000, offered for a gliding flight of 50 miles during 1923, and which has not been won, it has been suggested that this prize be transferred to the light 'plane field. Several correspondents have written in asking that the prize be retained for gliders, and there is certainly a good deal to be said for the arguments advanced. If Mr. Gordon Selfridge can be induced to let his offer stand for another year—i.e., extend it to the end of 1924—there is some encouragement to carry on with gliding experiments. Otherwise gliders and gliding will be things of the past, and certainly he would be a bold man who would venture to assert that nothing more can be learned from motor-less flight. The whole problem is one that is best taken up with Mr. Selfridge by the Royal Aero Club.

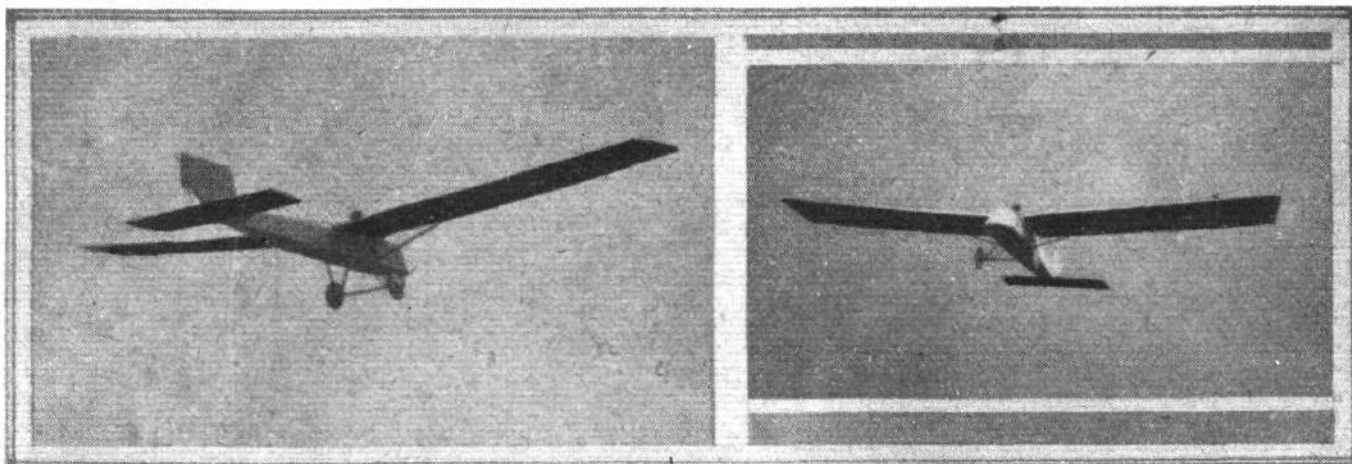
* * *

MR. ALAN J. COBHAM did not succeed in bringing back his D.H.53 light monoplane from Brussels by air. On the day

machine, it will be seen, is of the semi-cantilever type, braced on each side by two struts from the lower longerons. The fuselage is of rectangular section, built up of four spruce longerons and braced by diagonal spruce struts.

* * *

THE wing, and especially its mounting, is somewhat unusual. In plan view the wing is approximately rectangular, but the thickness tapers considerably from root to tip. The section used is, we understand, one developed by Mr. Nordman, and combines one of the U.S.A. sections with the Sloane curve. The wing is slightly raised above the top longerons, and is supported on four box-section struts bolted to the outside of the fuselage. The centre section of the wing is not covered, and the pilot's head and shoulders project above the wing. It might be expected that this arrangement would interfere somewhat with the aerodynamic efficiency of the machine, but we learn that as a matter of fact the gliding angle is quite good, while the wing arrangement makes for easy erecting and dismantling. As already mentioned, the wing is braced by struts on each side. The wing span is 40 ft. and the chord 54 ins.



Two views of the Nordman glider in flight.

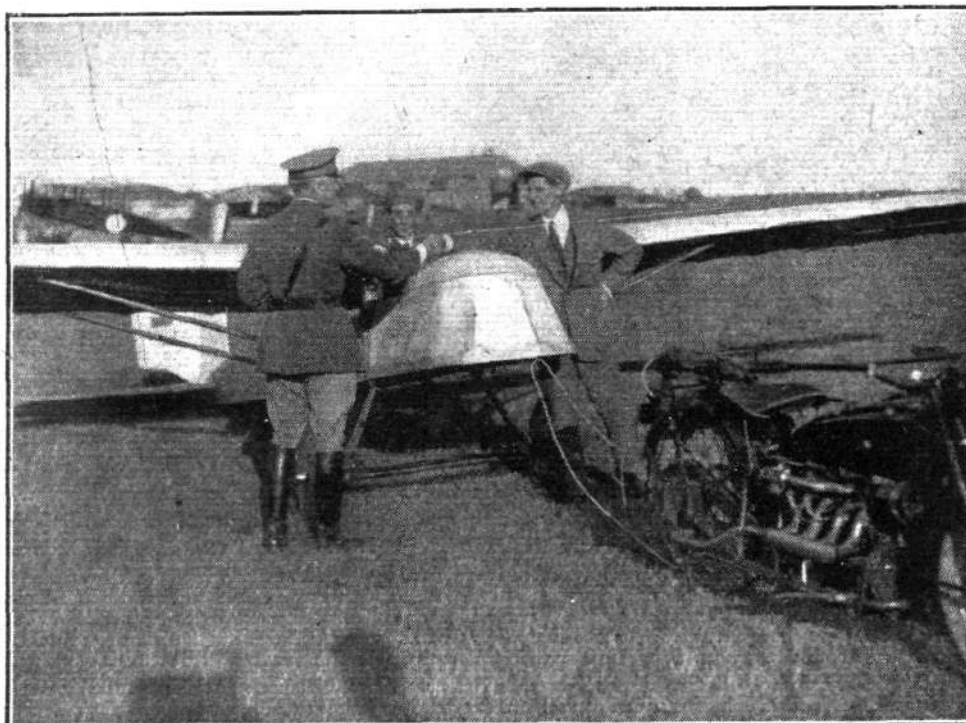
MR. NORDMAN is one of the charter members of the Long Island Flight Association, organised with a view to investigating the soaring flight problem. The first flights were made at the Belleclaire Country Club, L.I., the pilot being Mr. Arthur Heinrich. Experiments have been made with towing flight, and considerable success has been attained. On calm days when soaring is impossible over the relatively low hills, the tow ropes are attached to a motor-cycle, which, running along at good speed, gives the machine sufficient lift to reach a height of 30 or 40 ft. When the pilot judges that he is high enough he releases the tow rope (which is attached to the nose of the fuselage) and the machine commences to glide. In this manner glides of over 1,000 ft. have been made in calm air. In suitable country the Nordman glider should be capable of remaining aloft for long periods, as its controllability is stated to be excellent.

Up to the present unfavourable weather conditions have prevented the Carley (Dutch) light monoplane from flying

given a sufficiently strong wind there are several French experts who consider the task not impossible. Based on the best performances at Lypne (those of the "Wren" and A.N.E.C. monoplanes), half the distance should be possible on the amount of fuel permitted. If, therefore, sufficient assistance can be obtained from ascending currents to cover one-half of the distance the flight becomes possible. Personally, we are not sufficiently acquainted with the local conditions along the Seine to be able to express an opinion, but the task must necessarily be a very difficult one.

If the Solex prize has not been won by April 1, 1925, it will be awarded to the pilot who has covered the route stipulated on the smallest amount of fuel, provided that this does not exceed 3 kgs. This clause in the regulations rather seems to nullify the main conditions, and it should be comparatively easy for a well-designed light 'plane to accomplish the mileage of 63 miles per gallon necessary to complete the distance on 3 kgs.

The Nordman glider :
Major William N. Hensley, C.O. of Mitchel Field, congratulating Mr. Nordman on his successful machine. Note the Henderson motor-cycle used for towing in preliminary tests.



from le Bourget to Croydon. In our issue of December 27 we referred to the flight of this machine, piloted by the Belgian pilot Raparlier, from Holland to le Bourget on December 18. Since then M. Raparlier has been giving demonstration flights on the machine, and has demonstrated it to the French Section Technique. As soon as weather conditions improve the machine will probably be flown to Croydon, where further exhibitions of the machine's capabilities will be given.

In France there is some speculation as to the possibility of the 50,000 francs prize offered by the Solex carburettor firm being won during 1924. This prize is for a flight from Paris to Rouen, a distance of approximately 90 kms. (56 miles), on 1 kg. of fuel. It is, of course, quite obvious that no machine yet known would be able to cover this distance on the amount of fuel allowed, as to do so would require something like a mileage of 190 miles per gallon. Nevertheless, it is thought that by following the Seine valley, and given suitable wind conditions, the feat might just be possible. The hills along the course of the winding river are not inconsiderable, and

In Germany during the past summer a novel experiment was tried building a glider capable of alighting on water. The machine, known as the "Königsberg," was intended for use at Rossitten on the Kurisches Haff in the Baltic, and gliding along the sand dunes always meant the possibility of having to alight on the water when the pilot "ran out of wind." A stepped boat hull was tried, so as to enable the machine to be towed off, but it was found that the step was damaged when alighting on land. In the end a fuselage was built without step, and fabric covered. The sides and top are covered with a single layer, while the bottom has a double layer of fabric. It was found that this construction answered very well, the machine riding on the water for an hour without more than a very little water leaking in. Of course, the smooth bottom does not allow of towing the machine off the water, a start having to be made from land. A similar type of machine might provide quite good fun on the South Coast. It will be remembered that Raynham's Handasyde glider of 1922 was flown on to the sea without other special preparation than an extra coat of "Cellou" dope.

A Fokker "All-wing" Machine

In France designers have been busy for several years planning aeroplanes in which the fuselage is entirely suppressed, the wing being built deep enough to accommodate the crew and passengers. The de Monge monoplane described in FLIGHT recently is a flying scale model of this type. In America also machines without fuselage have been built. Now comes news that Fokker, the famous Dutch designer, has completed his plans for a large monoplane in which the cabin is inside the centre-section of the wing. It is stated that the new machine will be fitted with two Rolls-Royce engines built into the wing in such a manner that they can

be reached by the engineer during flight for inspection and small adjustments.

The Latham 1 passes her Tests

THE twin-engined Latham flying boat which took part in the Schneider Race at Cowes has just passed her acceptance tests at Cherbourg. She developed a speed of 161 m.p.h., and climbed to 13,000 ft. in 20 minutes. It will be remembered that the machine flew from Cherbourg to Cowes for the race in a strong gale, and favourably impressed visitors by her obvious seaworthiness. The engines fitted are Lorraine-Dietrichs of 400 h.p. each, placed tandem fashion.

THE FRENCH AIRSHIP CATASTROPHE

The "Dixmude" Now Assumed Lost

ONE of the most terrible catastrophes in the history of aviation must now be assumed to have taken place during the week before Christmas, resulting in the loss of the French airship "Dixmude" (ex-German L.72) with all hands. At the time of writing there is no reliable information relating to what actually happened, although several plausible theories have been advanced. The only authentic fact at the moment is that the body of the "Dixmude's" commander, du Plessis de Grenadan, has been found by Italian fishermen off Sciacca, Sicily. No other bodies have yet been found, nor any wreckage of the lost airship, although a diligent search is being made by French and Italian warships. For several days there were rumours of the airship having been seen by Touareg tribes drifting over the Sahara desert, but considerable doubt is now felt regarding the reliability of this information, which was at one time believed to be correct.

Briefly, the events, as far as they can be told from the relatively scant information available, that preceded the very sad accident are as follows: The "Dixmude" left her base at Cuers-Pierrefeu, near Toulon, on December 18 at about 5 a.m. She was to make a cruise to Tunis, Algeria, and the borders of the Sahara desert, and carried, in addition to her usual crew, several passengers, mostly military and naval officers of high rank. The total complement on board numbered 50 in all. At 7.30 p.m. on December 18 the airship was over Bizerta, Tunis, proceeding in a south-westerly direction. On December 19 the "Dixmude" was over Gafsa and Tozeur, and on December 20 one of her passengers dropped postcards near Ouargla, in the vicinity of Tuggurt, stating that all was well.

From this onwards the exact movements of the airship are very uncertain. A wireless message is stated to have been received at Medinin, in Tunis, on December 21, reporting that the airship was fighting a violent storm and that the petrol was running short. On Saturday, December 22, reports seem to indicate that the "Dixmude" was still being buffeted by the storm in the neighbourhood of Medinin and the Gulf of Gabes, and the captain of the Italian steamer *Porto Alessandretta* reports having picked up wireless calls of distress from the airship, giving her position. By timing the interval between the signals and accepting the positions sent by the airship, the captain estimated that the ship was being driven along at a rate of something like 125 miles per hour, but too much reliance should not be placed on this figure. A small error in timing, or in the positions given, would greatly alter the speed. Nevertheless, it seems certain that the ship was being driven along at a very high speed by the violent gale.

For several days no news was received—at any rate, no news that could be considered reliable. Then suddenly, on December 26, the "Dixmude" was reported to have been seen by Touareg tribesmen in the vicinity of In-Sahara, drifting towards the desert. For a time hope was entertained that the airship might have been drifted south by the gale, and that her crew might still have a chance of being saved. It was, of course, realised that by this time all petrol must have been consumed, and that the best that could be hoped for was that the crew might jump out with their parachutes near some oasis, and thus be saved. Then, on December 27, Italian fishermen found the body of the commander of the "Dixmude," Lieut. de Vaisseau du Plessis de Grenadan, off the coast of Sicily, near Sciacca. With the identification of the body of the Commander the last hope had to be abandoned, and the previous report of the airship having been seen over the Sahara on December 26 was regarded in official circles as of extremely doubtful reliability.

As soon as it was established that it was indeed the body of the Commander that had been found, French warships were rushed off to the spot in order to look for the rest of the crew and for pieces of wreckage. Up to the present, however, no trace of either crew or ship has been found.

Theories as to Cause

In the absence of reliable information, it is impossible to state exactly what happened, and all that can be done is to put forward certain suggestions and theories as to some probable causes. In the first place, the station master at Sciacca is stated to have seen a very strong light in the sky, which appears to indicate the possibility of the airship having caught fire, either through breaking her structure and sparks

from the fracturing girders and electric cables causing the fire, in the manner of our "R.38," or through being struck by lightning. Dropping into the sea somewhere in the Channel between Sicily and Tunis, the crew would have but small chance of being saved, especially in view of the very rough sea running at the time. It is believed that carrier pigeons were carried on board, and the fact that none have reached home seems to indicate that the catastrophe, of whatever nature it was, must have been so sudden as to afford no time for writing a message and liberating a pigeon. It is also more than likely that in that case there would not be time for the crew to don their parachutes, with which, it must be presumed, the airship was equipped.

It is possible that the airship may not have caught fire, although the fact of a strong light having been seen in the sky rather suggests that this was the case, and that the airship was simply forced down by loss of hydrogen until it fell into the sea. With the high sea running she could not, probably, last very long, although there should have been time for a message to be written and a pigeon sent off.

Another possibility suggested is that the airship was, in fact, at one time driven over Tunis and Sahara, and that all the crew, with the exception of the Commander, jumped overboard in their parachutes. Thus lightened the airship would receive a great amount of additional buoyancy, and might have got drifted out over the sea again, only to sink later, when night came and the lift was reduced. That would explain the presence of but one single body, that of the Commander, in the sea near Sicily. Personally, we incline to favour the theory that the airship caught fire for some reason and fell into the sea, and the probability is that the fire was caused by the failure of the structure. It is known that the "Dixmude" was designed (as the German L.72) for bombing raids at great altitudes and in fine weather only. Consequently, as much structural strength as possible would have to be sacrificed in order to obtain the "ceiling" necessary. Something very similar was the case with "R.38," whose girders failed and which subsequently caught fire from sparks from the girders and electrical cables.

There is a strong feeling in France that the cruise of the "Dixmude" was ill-advised and that there was insufficient co-operation between the airship and the meteorological service. The coming of the storm, it is claimed, could have been foretold, and the airship could have been warned of its approach and told to steer clear of it. It is alleged that this was not done, and the French Ministry of Marine has instituted an enquiry into the conditions under which the "Dixmude" was sent out on her fatal cruise, who gave the order, and whether all reasonable precautions had been taken.

Messages of Sympathy

The loss of the "Dixmude" is a severe blow to French aviation, and from all sides messages of sympathy have been sent. His Majesty King George sent to the President of the French Republic the following message:—

"Fearing from the latest information available that it is unfortunately all too probable that the airship 'Dixmude' has met with disaster, I ask you, M. le President, to accept in the name of the French nation the deepest sympathy which I offer on behalf of the whole Empire in the loss of so many gallant men, whose untimely fate is deplored here no less than in their own country.—George R.I."

Sir Samuel Hoare, Secretary of State for Air, has sent the following message to the French Minister of Marine: "On behalf of the Air Council and myself I wish to offer you sincere condolences for the loss of the 'Dixmude,' and to express our deep sympathy for the relatives of those who have been lost."

Air Chief Marshal Sir Hugh M. Trenchard, Chief of the Air Staff, has despatched the following message to the Chief of the French Naval Staff: "On behalf of the officers and men of the Royal Air Force I wish to express the deepest sympathy for the loss of the 'Dixmude' and her crew."

On December 31 Herr von Hoesch, German Charge d'Affaires in Paris, called at the Ministry of Foreign Affairs and expressed to M. Peretti Della Rocca the sympathy of the German Government with France in the loss of the "Dixmude."

NOTICES TO AIRMEN

Czecho-Slovakia : Ratification of International Air Convention : Aerodromes

1. THE Government of the Czecho-Slovak Republic having deposited its ratification of the International Air Convention on November 23, 1923, the Convention will come into force for Czecho-Slovakia, in respect of the Contracting States, on January 3, 1924.

2. The following are particulars of aerodromes in Czecho-Slovakia :—

(i) **Prague (Kbely).**—Military and Civil Customs Aerodrome.
Position.—Latitude 50° 7' N., Longitude 14° 32' E. Situated 6 miles E.N.E. of Prague, ½ mile S.S.W. of the village of Kbely, on the S. side of the Prague-Kbely road.

Description.—Good surface in parts. Levelling operations are in progress. The ground is being levelled in five stages, the portion which is actually being levelled being marked by red and white flags. Dimensions for landing, 1,350 × 810 metres.

Height above Sea Level.—945 ft.

Obstructions.—On the N.W. side are trees, 15 metres high ; a brick kiln chimney, 25 metres high ; hangars and buildings. At the W. corner are the W/T masts and aerial, 40 metres high.

Accommodation, Supplies, etc.—One iron hangar and three concrete hangars exist. There are also the workshops of the Cie. Franco-Roumaine and erecting shops of the "Aero" Aircraft Company on the aerodrome. Aviation petrol, oil and water are available.

Signals and Markings.—A white circle 165 ft. in diameter is marked on the ground. The name "Praha" is also marked on the ground in letters 33 ft. in height.

There is a wind sleeve on a hangar in the W. corner of the ground. A mobile wind "T" is also installed.

Communications.—The nearest railway station is at Vysocany, 3 kms. distant. Service to Prague, whence trains run to all parts.

(ii) *The following Military Aerodromes are open to Civil Aircraft in Cases of Emergency only.*

(a) **Bratislava (Vajnory)** (also known as *Pozsony* and *Pressburg*).
Position.—Latitude 48° 12' N., Longitude 17° 12' E. Situated 9 kms. N.E. of Bratislava.

Dimensions for Landing.—700 × 700 metres.

Accommodation, Supplies, etc.—Three hangars. Petrol, oil and water are available.

(b) **Eger (Cheb).**

Position.—Latitude 50° 5' N., Longitude 12° 24' E. Situated 2½ kms. E. of Eger, on S. side of road.

Dimensions for Landing.—800 × 600 metres.

Accommodation, Supplies, etc.—There are eight hangars and six repair shops. Petrol, oil and water are available.

(c) **Kassa.**

Position.—Latitude 48° 42' N., Longitude 21° 16' E. Situated 3 kms. S. by E. of Kassa, between the main road and the railway.

Dimensions for Landing.—400 × 200 metres.

Accommodation, Supplies, etc.—One canvas hangar. Petrol, oil and water are possibly available.

(d) **Nyitra.**

Position.—Latitude 48° 18' N., Longitude 18° 5' E. Situated immediately S.E. of town, on E. bank of river.

Dimensions for Landing.—600 × 500 metres.

Accommodation, Supplies, etc.—Four hangars. Petrol, oil and water are available.

(e) **Olmütz.**

Position.—Latitude 49° 35' N., Longitude 17° 13' E. Situated 3 kms. W. by S. of Olmütz, on S. side of main road.

Dimensions for Landing.—800 × 800 metres.

Accommodation, Supplies, etc.—Three hangars, workshops, petrol, oil and water are available. (No. 104 of 1923.)

Air Navigation (Consolidation) Order, 1923

1. THE Air Navigation (Consolidation) Order, 1923, will come into operation as from January 1, 1924, revoking on that date the Air Navigation Orders, 1922 and 1923. Attention is drawn to certain effects of the new Order, as follows :—

2. *Log Books, etc.*—The journey log book to be kept in respect of every British aircraft registered in Great Britain and Northern Ireland is to be one issued by the Secretary of State. These books will be issued on demand by the Air Ministry at a price of 4s. each. Each book will be issued in respect of an individual aircraft, and the page containing the description of the aircraft will be completed by the Air Ministry. The certificate of airworthiness of the aircraft is to be kept in the pocket of the journey log book, and all aircraft so registered are required to carry this log book when flying. The aircraft and engine log books are no longer required to be carried in the aircraft.

3. *Smoking in aircraft.*—Smoking is prohibited in any aircraft registered in Great Britain and Northern Ireland, wherever such aircraft may be, or in any other aircraft when in or over Great Britain and Northern Ireland.

4. *Previous Notices affected.*

N. to A. No. 92 of 1920. The line "Journey log book, C.A. Form 26. Price 4s." is deleted. (No. 105 of 1923.)

Croydon Aerodrome : Strontium Beacon.

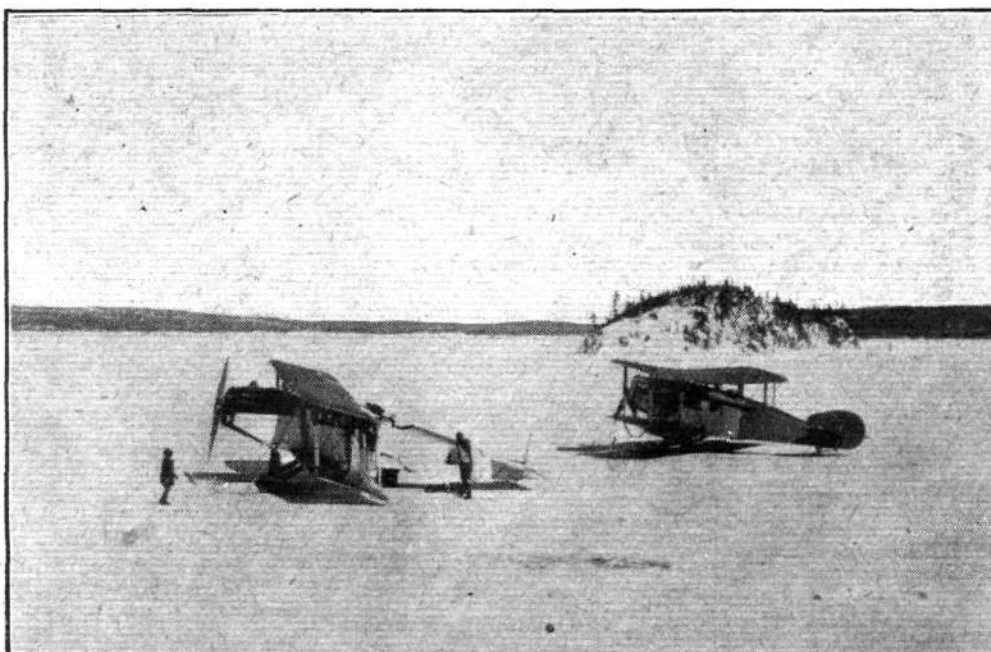
1. An additional flashing beacon has been installed in the S.W. corner of the Croydon aerodrome, as an aid to the location of the aerodrome by aircraft during conditions of poor visibility by night or day. The operation of the beacon is at the discretion of the Civil Aviation Traffic Officer, and it exhibits a red flashing light every three seconds, thus :—

Flash	0.1 sec.
Eclipse	2.9 secs.

This beacon is supplementary to and entirely independent of the aerial pilotage light notified in Notice to Airmen No. 64 of 1921.

2. Pilots are warned that this light should not be confused with the signals whereby the firing of a red pyrotechnical light or the flashing of a red lamp is an instruction not to land. (No. 107 of 1923.)

A Christmas Greeting from Canada : This photograph is from a Christmas card sent us by the Laurentide Air Service, Ltd., of Montreal. The machines on the ice are a Martinsyde and a Westland.



AIR FORCE RESERVE OF OFFICERS

Two Hundred Additional Pilots Required.

THE Air Ministry announces that the expansion of the Reserve of Air Force Officers by the admission of ex-officers of the Flying Services and others with special qualifications for flying and technical duties, which was decided upon in February last, has proved an unqualified success, and the number of pilots asked for the Reserve during the present year were obtained without serious difficulty. Four civil schools have been established for training Reserve pilots—near London by the De Havilland Aircraft Company, at Bristol by the Bristol Aeroplane Company, at Coventry by the Sir W. G. Armstrong-Whitworth Aircraft, Ltd., and near Glasgow by Sir William Beardmore and Co. Approximately 250,000 miles have been flown by Reserve pilots at these schools since their formation.

It has now been decided that a further expansion of the Reserve should take place immediately, in order to increase the strength of the Reserve, and the Royal Air Force is therefore prepared to enrol approximately 200 additional pilots for the Reserve from those who served as pilots in the flying services during the War or who hold civil licences for flying commercial aircraft.

As a large proportion of the pilots who have already entered the Reserve reside south of the Trent, where three of the present training schools are situated, it has also been decided to establish within a short time two new training schools in the North of England, so that better facilities can be provided to ex-pilots residing in the North than exist at present, and it is therefore hoped that the present announcement will result in an adequate response to join the Reserve from ex-pilots residing North of the Trent and in Scotland, where the numbers desired have not yet been obtained.

First Seaplane Training School Being Opened.

It is proposed to open one of the new schools at a convenient centre in the North-West of England, and the other at Brough, in Yorkshire, where the first seaplane training will be undertaken. Land-plane training will also be given at this school.

Candidates for the Reserve, who should not be, as a general rule, more than 31 years of age, and who must enrol for a minimum period of three years' service, will be interviewed by a Selection Committee and examined by a Medical Board, either in London or at certain centres in the North, which will be notified in due course.

Reserve pilots are required to complete not less than 12 hours' flying each year on up-to-date war-type machines, and carry out the tests laid down by the Air Ministry from time to time. Whenever possible this training is carried out quarterly, in periods of not less than two days and not more than six days in each quarter. In the first instance it may be necessary for pilots to carry out a re-qualifying course before proceeding with the normal training, and every endeavour is made in these circumstances to have the course carried out to suit the convenience of the officers concerned.

Accepted candidates will be paid retaining fees of £30 per annum, and they will also receive Royal Air Force rates of pay and allowances of their rank during their period of training. While candidates are required to pay their own travelling expenses when appearing before the Selection and Medical Boards, all subsequent travelling expenses in connection with flying training will be paid by the Air Ministry.

Application forms and full information regarding the Reserve can be obtained from the Secretary, Air Ministry, Adastral House, Kingsway, London, W.C. 2.

CORRESPONDENCE

The Editor does not hold himself responsible for opinions expressed by correspondents. The names and addresses of the writers, not necessarily for publication, must in all cases accompany letters intended for insertion in these columns.

THE SELFRIDGE 1,000-GUINEA PRIZE

[2081] I have read with interest that is to some extent personal, of the proposed transferring, subject to the concurrence of Mr. Selfridge, of the 1,000-guinea prize for a human-propelled flight of 50 miles, to the light 'plane class.

May I add my voice to that of your correspondent, and suggest that it would be more than a pity to quash the only incentive in the matter of a prize existing for this type of study in aeronautical science?

You mention that "In Germany the interest is as keen as ever, but the subject is tackled differently." Quite so. Our Government in general must eventually be taught that British patriotism starves and becomes lethargic if they allow it to do so. The percentage of imaginative and inventive powers prevalent in the British people is greater than in any in the world. In fact, every country other than our own places every incentive possible forward to those who might possibly assist in their advancement. The inventive powers of the British people cannot be more accurately proved than by the fact of our sudden jumps to success, in almost every case a record of its class, absolutely on the spur of the moment. Instance, the Great War. Our superior ships, guns, aeroplanes, and equipment, all the product of sudden emergencies and British brains, not years of study and preparation.

Not being a literary expert, I am eulogising on these points in order that it may rouse discussion amongst members of the Aero Club who hold positions in Government circles, and others who may have the opportunity of putting forward assistance and incentives to the general public to use their mind energies to their country's and, incidentally, to their own advantage.

I have pleasure in advising you that I am personally

making, for an experiment, a biplane for adaptation to human power or motor and human power by the method of pulsating wing propulsion.

It was my direct intention to compete for Mr. Selfridge's prize, but time has beaten me in this instance, and, in consequence, I shall not be ready to compete until March 1, 1924.

I have piloted and experimented with 16 different types of 'planes, and have some remarkable results from my models featuring pulsating wing propulsion.

My compliments to Mr. Gray of Berwick-on-Tweed, who, I hope, will have success enough to give me at least a keen competitor.

East Dulwich.

December 24, 1923.

F. J. FRAPE,
Ex-Lieut., R.A.F.

SELFRIDGE GLIDER PRIZE

[2082] I note you ask for other views *vs* the above. This prize offers inducement not only to gliders, but to self-propelled machines, and to produce this involves the expenditure of considerable time and experiment. No doubt, there are numbers of enthusiasts and experienced practical mechanics who, like myself, have been working on this problem, secretly, for the last twelve months, to produce a self-propelled glider. I have been able to obtain more than enough propulsion for sustained flight, and hope shortly to complete my machine and test same, but can only afford to do so in my spare time. It seems a pity to transfer the prize to the more wealthy concerns and probably less efficient machines, and take away the only chance the working mechanic has to show his ability.

EXPERIENCED ENTHUSIAST.

Indian Army Officers' Pay in Iraq

A REVISION of the emoluments of Indian Army officers serving in Iraq has been approved, with effect from April 1, 1922. The new conditions include a Colonial allowance of Rs. 100 per mensem. Claims by officers who served in Iraq prior to October 1, 1922, but left the country before that date should be submitted to the Command Paymaster, Overseas Bases, "Iraq Section," The Hutments, Woolwich Common, London, or the Brigade Accountant, Royal Air Force, Baghdad, whichever holds the pay accounting records of the claimant concerned.

Claims by officers who served in Iraq prior to October 1, 1922, but continued serving in the country after that date should be submitted, for adjustment, to the Brigade Accountant, Royal Air Force, Baghdad.

A Mexican Air Line

A CONTRACT providing for a commercial air service (between Vera Cruz and Progreso) has been signed by the Mexican Minister of War with the Aerial Navigation Co. of Mexico. This company, which is allied with the Colombian German Air Transport Co. (Scadta), will use Junkers machines and German pilots.

LONDON TERMINAL AERODROME

Monday evening, December 31, 1923

DECEMBER has been one of the worst months from a flying point of view that has yet been experienced by civil aeroplanes. On no less than 18 days out of the whole month flying has been impossible owing to weather conditions. The snowstorms that have occurred along the various airways have been to some extent accountable for this, and in two cases have caused machines to be held up at foreign aerodromes.

There has been a big rush of traffic for the Christmas holidays, and, fortunately, for several days before Christmas the weather was fit for flying, and the various airways were able to cope to some extent with this welcome influx of traffic. Daimler machines have been carrying plum puddings to Berlin for the English Colony there, while the Instone Air Line have had over a ton of geese and turkeys for the Army of Occupation on the Rhine. From Paris the Handley Page Transport Company have been bringing full cargoes of perfumery and wireless headphones. One consignment of perfumery alone weighed considerably over a ton.

On Christmas Eve Mr. Lloyd arranged a party at the Trust House, to which all who were compelled to remain on the

aerodrome were invited. This was quite a bright affair, and was greatly appreciated by foreign pilots and mechanics, who were stranded at Croydon over the holiday season.

A New Aerodrome Beacon

THE new light which has been erected on the south-west corner of the aerodrome takes the form of a strontium beacon which throws a fan-shaped beam extending from 90° from the horizontal to the vertical. This beam revolves, making one complete revolution every three seconds. The beam is a deep red, and is designed to pierce mists and to indicate the position of the aerodrome when conditions of poor visibility obscure other lights. There has been a considerable amount of night-flying recently, the Daimler air expresses very often arriving from Rotterdam after dusk, and the De Havilland Aircraft Company have a machine at Croydon which is flying over London and the suburbs at night, carrying under its lower plane an illuminated advertisement. There is some controversy at the present time as to what height this machine should fly above London in order to ensure the safety of the crowds in the streets.

COUPE COMMODORE LOUIS D. BEAUMONT

We publish below the Supplementary Regulations for 1924 for the Coupe Commadore Louis D. Beaumont. The General Regulations were published in full in our issue for May 10, 1923, so it is only necessary for us to remind our readers that this competition is an international one, and is a speed contest for Class C machines for prizes amounting to 200,000 francs, presented by Commadore Louis D. Beaumont of the United States. Competitors must be presented by a National Federation affiliated to the Fédération Aéronautique Internationale. It will be remembered that the competition for 1923 was abandoned.

Supplementary Regulations for 1924

Art. 1.—The contest will take place over 300 kilometres, with a circuit of 50 kilometres, the starting and finishing line being at the Istres Military Aviation Centre (Bouches-du-Rhône).

Landings, repairs, and replenishments are allowed.

Art. 2.—The contest will take place on Sunday, June 22.

Art. 3.—Entries presented by the National Federations must reach the Commission d'Aviation of the Aero Club de France before February 1.

The contest will not be held unless at least two nations are represented. In the event of the contest being annulled on this account, the entry fees shall be returned in full.

Art. 4.—Competitors must send to the Secretary of the Commission d'Aviation before 6 p.m. on May 1 the information required in Art. 9 of the General Regulations.

Art. 5.—Machines must have made a test flight of at least 5 minutes not less than a fortnight before the contest, either in their own country, in the presence of three qualified representatives of their National Federation, or in France, in the presence of three qualified representatives of the French Federation, i.e. the Aero Club de France.

The reports of these flights must reach the Commission d'Aviation of the Aero Club de France at least one clear week before the date fixed for the contest.

The representatives must state in their report that the flight and landing were properly carried out.

Art. 6.—Machines must be at the Centre d'Aviation Militaire, Istres, at least two clear days before the Speed Contest. The main planes will then be stamped. Any machine not present two clear days before the contest will not be allowed to compete.

Competitors may fly over the aerodrome prior to the contest with the permission of the Commandant of the Centre Militaire, and in accordance with any regulations laid down by him.

Art. 7.—Each entrant shall nominate, by a declaration in writing to be handed to the Commissaires Sportifs before 6 p.m., on the day before the contest, a person to represent him on the course. This person shall declare the time of departure.

Art. 8.—The contest shall be open from 8 a.m. to 8 p.m. (winter time).

During this period of 12 hours, starts shall be made at times selected by the competitors as follows:—

Each entrant, or the person accredited by him, shall inform the Commissaires Sportifs of his intention of starting, indicating the time at which he wishes to start. The Commissaires Sportifs shall then hand to him a slip fixing the starting time, after which 30 minutes shall be allowed to the competitor to cross the starting line in flight.

The competitor shall be allowed a second start in the event of his first flight not being completed or not being in order. This start shall be made under the same conditions as the first.

Art. 9.—The contest shall not be won if the speed attained is less than 290 kms. per hour.

Art. 10.—In the event of bad weather on the day of the contest, the Commissaires Sportifs may postpone the contest from time to time.

R.A.F. MEMORIAL FUND

At a meeting of the Executive Committee held at No. 7, Idlesleigh House, Caxton Street, on December 19, 1923, the following were present: Sir Charles McLeod (in the Chair), Dame Helen Gwynne-Vaughan, Mrs. Barrington-Kennett, Mrs. L. M. K. Pratt-Barlow, Air Vice-Marshal Sir Vyell Vyvyan, Air Commodore C. A. H. Longcroft, Lieut.-Commr. H. E. Perrin.

The Committee noted with much pleasure the receipt by the Hon. Treasurer of a donation from the Air Council of a handsome sum of £1,200, which was the Royal Air Force share of the profits made at the Royal Tournament, Olympia, in June, 1923, and which profits were wholly delegated to the use of this Fund by the kindness of the Air Council.

Grants made since the last meeting of the Committee, amounting to the sum of £2,587 14s., were approved.

The Secretary of the Vanbrugh Castle School Sub-

Committee (in the absence of the Chairman of that Sub-Committee, Air Vice-Marshal Sir Geoffrey Salmond) informed the meeting that the School would re-open on January 8, 1924, a new wing having been satisfactorily completed, thereby enabling the admission of 12 additional boys, which would make a total of 39, all being the orphan sons of airmen who died during the Great War whilst serving with the Royal Air Force.

The Chairman of the Grants Sub-Committee, Lieut.-Commr. H. E. Perrin, placed before the Committee for their consideration an appeal made by an ex-officer of the R.A.F. for an educational grant for his son, and, after hearing the particulars, the Committee approved of the recommendation of the Sub-Committee, that an annual grant of £37 10s. for three years should be sanctioned from the Salting Benefaction.

THE ROYAL AIR FORCE

ROYAL AIR FORCE INTELLIGENCE

Appointments.—The following appointments in the R.A.F. are notified:—

General Duties Branch

Wing Commander R. C. M. Pink, C.B.E., to No. 1 Wing H.Q., India, pending taking over command. 23.11.23.

Squadron Leaders: F. E. Sandford, A.F.C., to No. 4 Flying Training Sch., Egypt. 28.11.23. R. G. Parry, D.S.O., to H.Q., Egypt. 28.11.23.

Flight Lieutenants: G. Y. Tyrrell, M.C., to No. 47 Sqdn., Egypt. 6.12.23. H. J. Edgar, to R.A.F. Depot. 1.1.24. A. F. Quinlan, to Sch. of Army Co-operation, Old Sarum. 5.1.24. P. G. Scott, to R.A.F. Depot (non-effective pool) on transfer to Home Estab. 28.11.23.

Flying Officers: A. T. S. Leguen de Lacroix and H. Aldridge, both to Aden Flight, Egypt. 5.12.23. J. B. V. Glyde, to No. 31 Sqdn., India. 19.11.23. A. H. Love, to No. 208 Sqdn., Egypt. 1.10.23. (Hon. Flt. Lieut.) A. J. Carlisle, to No. 60 Sqdn., India. 29.11.23. G. N. Coward, to No. 2 Flying Training Sch., Duxford. 28.12.23. P. J. Hayes, A.F.C., to R.A.F. Base, Calshot. 27.12.23. L. D. Stewart, to C and M Party, Cattewater. 3.1.24. P. J. R. King, to No. 22 Sqdn., Martlesham Heath. 1.1.24. E. J. Protheroe and L. P. Hirsch, both to School of Balloon Training, Larkhill, for course of instruction. 14.1.24. C. T. Walkington, to R.A.F. Base, Gosport. 28.12.23. E. Brewerton, D.F.C., to R.A.F. Base, Gosport. 1.1.24. S. W. Smith, to Night Flying Flight, Biggin Hill. 17.1.24.

Pilot Officers: T. A. Verney-Cave and J. C. Savory, both to No. 56 Sqdn., Biggin Hill. 19.12.23. O. R. Pigott, to No. 7 Sqdn., Bircham Newton. 1.1.24. C. J. Pooley and W. P. Wiltshire, both to Aircraft Park, India. 19.11.23. H. S. C. Bassett and H. C. E. C. P. Dalrymple, both to School of Balloon Training, Larkhill, for course of instruction. 14.1.24. E. R. Newbigging, to No. 24 Sqdn., Kenley. 12.12.23.

Stores and Accountants Branch

Squadron Leader R. W. Thomas, O.B.E., to H.Q., Egypt. 1.12.23.

Flight Lieutenants: T. G. Skeats, to Stores Depot, Egypt. 29.11.23. A. Jukes, M.B.E., to No. 5 Wing H.Q., Biggin Hill. 31.12.23. A. J. Redman, D.F.C., to C and M Party, Cattewater. 1.1.24. A. J. Cox, M.B.E., to No. 25 Sqdn., Hawkinge. 4.10.23.

Flying Officers (Accountants): R. E. Steggall, to No. 4 Stores Depot, Ruislip. 14.1.24. E. C. M. Knott, to No. 56 Sqdn., Biggin Hill. 4.1.24.

Medical Branch

Squadron Leaders: T. J. Kelly, M.C., M.B., B.A., to H.Q., Iraq. 1.12.23. J. Prendergast, M.B., B.A., to No. 84 Sqdn., Iraq, instead of to Stores Depot as previously notified. 18.2.23. M. Coghlan, M.B., to R.A.F. Depot. 11.1.24. J. J. Walsh, to No. 4 Flying Training Sch., Egypt. 6.12.23.

New Year Honours.—It is announced in a Supplement to the *London Gazette* that the King has announced his intention of conferring the following honours:—

To be a Viscount.—Inchcape, James Lyle, Baron, G.C.M.G., K.C.S.I., K.C.I.E. Created a baron in 1911. He is chairman of the Peninsular and Oriental and British Steam Navigation Companies. During the War he was a member of the Imperial Defence Committee, of the Air Ministry's Advisory Committee on Aviation, and of the Commercial Intelligence Committee. He took over all the Government's standard ships and sold them, realising for the Exchequer £35,000,000 at a total sales cost of £850. In 1920 he went to India at the request of the Government and sold on their behalf the Mesopotamia war craft, realising £1,080,000. He was a member of the National Economy (Geddes) Committee, 1921-22, and went to India in 1922 as chairman of the Indian Retrenchment Committee.

G.C.B. (Mily. Divn.).—Trenchard, Air Chief Marshal Sir Hugh Montague, Bt., K.C.B., D.S.O., A.D.C., Royal Air Force.

K.C.B. (Mily. Divn.).—Swann, Air Vice-Marshal Oliver, C.B., C.B.E., Royal Air Force.

C.B. (Mily. Divn.).—Munro, Air Commodore David, C.I.E., M.B., M.A., F.R.C.S. (Edin.), Royal Air Force Medical Services.

Air Ministry, January 1, 1924

Award and Promotions.—The King has been pleased to approve of the following award to the undermentioned officer, of the Royal Air Force:—

Air Force Cross.—Flying Officer Basil Royston Carter.

Promotions.—The under-mentioned officers are promoted to the ranks stated, with effect from January 1, 1924:—

General Duties Branch

Air Commodores to be Air Vice-Marschals.—Francis Rowland Scarlett, C.B., D.S.O.; Henry Robert Moore Brooke-Popham, C.B., C.M.G., D.S.O., A.F.C.

Wing Commanders to be Group Captains.—William Foster Macneecce, C.B.E., D.S.O., D.F.C.; Cecil Francis Kilner, D.S.O.

Squadron Leaders to be Wing Commanders.—Alexander Charles Winter, O.B.E.; Arthur Bruce Gaskell, D.S.C.; Arnold John Miley, O.B.E.; Archibald Corbett-Wilson; Arthur William Tedder; Ernest Henry Johnston, O.B.E.; Bertine Entwistle Sutton, D.S.O., O.B.E., M.C.; William Ronald Read, M.C., D.F.C., A.F.C.

Flight Lieutenants to be Squadron Leaders.—Alfred William Clifford Vernon Parr; Oswyn George William Gifford Lywood, O.B.E.; Thomas Geoffrey Bowler; William Hickley Lovell O'Neill, M.C.; Francis Edgcombe Hellyer, O.B.E.; Edward Ardley Beaulah; Eric Roby Vaisey; Cyril Bertram Cooke; Robert Dickinson Oxland; Richard Cecil Hardstaff; Douglas Iron, O.B.E.; Arthur Trafalgar Williams; Edward Dawson Atkinson, D.F.C., A.F.C.; Claude Russell Cox, A.F.C.; James Milne Robb, D.F.C.; Harold Melsome Probyn, D.S.O.; Reginald Frederick Stuart Leslie, D.S.C., D.F.C., A.F.C.; John Leacroft, M.C.; Vincent Greenwood; William Hastings de Warrenne Waller, A.F.C.; Leonard Horatio Slatter, O.B.E., D.S.C., D.F.C.; Lionel Mundy Bailey, A.F.C.; Thomas Edward Barham Howe, A.F.C.; Siegfried Richards Watkins, A.F.C.; Victor Somerset Erskine Lindop; Walter Hunt Longton, D.F.C., A.F.C.; Horace Percy Lane, D.S.O., D.F.C.

Flying Officers to be Flight Lieutenants.—Edward Selwyn Moulton-Barrett; Robert Alexander Birkbeck, D.F.C.; Desmond Fitzgerald Fitz-Gibbon, D.S.C.; Aubrey Beauclerk Ellwood, D.S.C.; Cyril Chapman, D.S.C.; John Auguste Boret, M.C., A.F.C.; Thomas Arthur Warne-Browne, D.S.C.; Albert Edward Dark; Clifford Westly Busk, M.C.; Eric Burton; Norbert Marie Sackville Russell; Arthur Gordon Jarvis, A.F.C.; John Eric MacLennan; Robert Mordaunt Foster, D.F.C.; Charles Crawford; Percy Harold Davy; William Harold Markham; Harold Thomas Lydford, A.F.C.; Maurice Burbidge; Clarence Edward Williamson-Jones, D.F.C.; Harold Hunter Down, A.F.C.; Lynden Charles Wynne-Tyson; Francis Charles Beresford Savile; Frank Wright; George Gaywood Banting; Arthur Mostyn Wray, M.C., A.F.C.; John Bussey; Walter English Swann; George Vivian Howard, D.F.C.; Seymour Caley Harker; George Dermot Daly, D.F.C.; Charles Frederick le Poer Trench; Clifford Arthur Bernard Bowman Wilcock, A.F.C.; William Munro Yool; Herbert Nind Hampton, D.F.C.; Frank Linden Hopps, A.F.C.; Louis William Jarvis; Henry Michael Moody, M.C.; Charles James Wilfred Hatcher, A.F.C.; Dudley Price; Stanley Harry Wallage, M.C.; John Henry Bentham; Richard Llewellyn Crofton, M.B.E.; Vivian Steel Parker; William Stanley Watson; Walter John Seward; Bruce Bernard Caswell; Edward Leslie Barrington, M.C., D.F.C.; Stuart Douglas Culley, D.S.O.; James MacGregor Fairweather, D.F.C.; William James Daddo-Langlois; Harold Victor Robbins; Stephen Charles Strafford, D.F.C.; Eric Hardy Richardson; John Robert Irving Scambler, A.F.C.; Robert John Rodwell; Andrew MacGregor, D.F.C.; George Howard Homer Scutt, M.C.; John Wakeling Baker, M.C.; Hugh Robert Junor, D.F.C.; Francis Joseph Fogarty; Humphrey William Baggs; Leslie Gordon Harvey; Allan Lancelot Addison Perry-Keene; Edward Percy Mackay; William Henry Poole, A.F.C., M.M.; Christopher Holt Stilwell; John McFarlane, M.C.; Noel Hamilton Jay; Reginald James Read; Frederick Thomason, D.F.C., M.M.; Theodore Linley Lowe; Herbert Hackney; James Clement Foden, A.F.C.; Hubert Poyntz Gaynor Leigh; Douglas Leslie Blackford.



A seasonable greeting
to FLIGHT and its
readers from India.



BY DOUGLAS B. ARMSTRONG

THE coming year is destined to witness considerable extension of the air mail service the world over, and as a natural result many new issues of air post stamps may be anticipated. Amongst those countries where new air stamps are projected are Argentina, Denmark, Czecho-Slovakia, Poland, Roumania, Italy, Portugal, Indo-China, Sweden, Germany and Siam. How many of these will actually materialise is a matter for conjecture, since so large a proportion of projected air stamps prove abortive, but it is safe to prophesy that additions to the air post collection in 1924 will be both numerous and interesting.

This is all to the good, for a moderate supply of novelties tends to quicken interest in the pursuit, which deprived of such necessary stimulus might well grow lethargic through sheer inanition. As it is, we can look forward to a year of pleasant and, let us hope, profitable activity in the aerophilatelic field.

Plymouth-Belfast Covers

AERO collectors who have been anxiously seeking to add to their collections covers authentically "flown" in the Plymouth-Belfast air service are, we fear, doomed to disappointment. We learn from an authoritative source that it is intended solely for the rapid conveyance of incoming American mails, whose bags will be passed straight on to the waiting 'plane and sped to their destination without being opened by the postal officials at Plymouth; so that even a date stamp will be lacking as a means of identification.

At present the service is suspended pending arrangements for a suitable landing ground at Belfast, but it should be working ere the new year is much older.

Two letters only were carried on the trial flight in September, 1923, containing congratulatory messages from the Mayor of Plymouth to the Lord Mayors of Manchester and Belfast respectively. A well-known air post collector, who endeavoured to secure the flown covers for his collection, learnt to his dismay that one had been consigned to the limbo of the waste-paper basket, whilst the other had been presented to the city museum!

There is some consolation in the knowledge that one at least of these historic covers has been preserved.

"R.34" Letters

MR. W. E. HUGHES, who is indefatigable in the pursuit of information on behalf of air post collectors, has ascertained from the United States Post Office Department that, although there is no record of the receipt of mail by the dirigible "R.34" in July, 1919, it is believed the dirigible mentioned brought to the United States some private correspondence which was delivered to the parties for whom intended without the intervention of the United States postal service."

Such flown covers must be infinitely scarcer than those carried on the return journey (which represented a net weight of 6,803 grammes), and the production of a well-authenticated example would be of the greatest interest to aero-philatelists.

Rarest Air Stamp

At a recent New York stamp auction a single unused specimen of the rare error of the 24 cents U.S. air post stamp of 1918, with the centre inverted, sold for \$610 (£150).

Readers are invited to forward to the Editor of FLIGHT letters, etc., bearing aerial stamps or postmarks for mention in this column, as well as out-of-the-way varieties, etc.

We shall also be pleased to hear from correspondents interested in air-stamp collecting, and to answer any queries.

C.A.M.S. for 1924

We have just received from Chantiers Aero-Maritimes de la Seine (C.A.M.S.), of 72, Rue La Boétie, Paris, their 1924 catalogue. In looking through this catalogue, which is excellently produced and contains some 40 pages of text and

illustrations, the main thing that strikes one is the remarkable progress made by this firm since it was first established by Mr. Lawrence Santoni in 1920. This progress is graphically demonstrated by the fact that the catalogue under review gives particulars and illustrations of no fewer than eight different models of flying boats. There is a type for practically every requirement in air work, as may be gathered from the following list of the eight machines listed: 30-T (180 Hispano), three-passenger commercial; 33-T (two tandem 260 Hispanos), seven-passenger commercial; 30-E (140 Hispano), two-seater military school; 31 (300 Hispano), single-seater military scout; 32-R (180 Hispano), military two-seater reconnaissance with folding wings; 33-B (two tandem 260 Hispanos) military bomber; 36-bis (360 Hispano), tractor racer; 38 (360 Hispano), pusher racer. A large family indeed!

PUBLICATIONS RECEIVED

Illustrated Calendar, 1924. The Bristol Aeroplane Company, Ltd., Filton, Bristol.

Aeronautical Research Committee, Reports and Memoranda: No. 830 (Ae. 81).—Experiments with a Family of Airscrews: Part II. Experiments on Airscrews with Tractor and Pusher Bodies. By A. Fage, C. N. H. Lock, H. Bateman, and D. H. Williams. November, 1923. Price 1s. 9d. net. No. 840 (M. 15).—The Constitution and Age-Hardening of the Ternary Alloys of Aluminium with Magnesium and Copper. By Marie L. V. Gayler. December, 1922. Price 1s. net. No. 841 (M. 16).—The Heat-Treatment and Mechanical Properties of Alloys of Aluminium with Small Percentages of Copper. By D. Hanson and Marie L. V. Gayler. December, 1922. Price 6d. net. No. 852 (F. 3).—Fire Experiments with Various Types of Fire-Proof Bulkheads. November, 1922. Price 1d. net. No. 875 (M.N. 7).—The Northerly Turning Error of Compasses in Aircraft. By A. P. Rowe. November, 1921. Price 1s. net. London: H.M. Stationery Office, Kingsway, W.C. 2.

AERONAUTICAL PATENT SPECIFICATIONS

Abbreviations: cyl. = cylinder; I.C. = internal combustion; m. = motor. The numbers in brackets are those under which the Specifications will be printed and abridged, etc.

APPLIED FOR IN 1922

Published January 3, 1924

- 21,031. M. N. MACLEOD. Aerial photography. (207,842.)
24,133. ENGLISH ELECTRIC COMPANY, LTD., and W. O. MANNING. Hydraulically-actuated mechanism for control gear of aeroplanes, etc. (207,867.)
28,400. A. J. T. IRELAND. Screw propellers. (207,949.)

APPLIED FOR IN 1923

Published January 3, 1924

- 29,378. ENGLISH ELECTRIC COMPANY, LTD., and W. O. MANNING. Hydraulically-actuated mechanism for control gear of aeroplanes, etc. (208,102.)

NOTICE TO ADVERTISERS

All Advertisement Copy and Blocks must be delivered at the Offices of "FLIGHT," 36, Great Queen Street, Kingsway, W.C. 2, not later than 12 o'clock on Saturday in each week for the following week's issue.

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